ECONSTOR
Make Your Publications Visible.

A Service of
ZBW
Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Woodbury, Stephen A.

Working Paper

Employer Training Needs in Hawaii: Summary Report

Upjohn Institute Working Paper, No. 92-15

Provided in Cooperation with:
W. E. Upjohn Institute for Employment Research, Kalamazoo, Mich.

Suggested Citation: Woodbury, Stephen A. (1992) : Employer Training Needs in Hawaii: Summary Report, Upjohn Institute Working Paper, No. 92-15, W.E. Upjohn Institute for Employment Research, Kalamazoo, MI,
https://doi.org/10.17848/wp92-15

This Version is available at:
https://hdl.handle.net/10419/172350

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

WWW.ECONSTOR.EU

Mitglied der Leibniz-Gemeinschaft

W.E.
UPJOHN INSTITUTE
FOR EMPLOYMENT RESEARCH

Upjohn Institute Working Papers | Upjohn Research home page

1992

Employer Training Needs in Hawaii: Summary Report

Stephen A. Woodbury
Michigan State University and W.E. Upjohn Institute, woodbury@upjohn.org

University of Hawaii at Manoa, Industrial Relations Center

Upjohn Institute Working Paper No. 92-15

Citation

Woodbury, Stephen A. 1992. Employer Training Needs in Hawaii: Summary Report . Upjohn Institute Working Paper No. 92-15. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. https://doi.org/10.17848/wp92-15

This title is brought to you by the Upjohn Institute. For more information, please contact ir@upjohn.org.

Employer Training Needs in Hawaii

Summary Report

Upjohn Institute Staff Working Paper 92-15

Stephen A. Woodbury

November 1992

Prepared for:
Hawaii State Department of Labor and Industrial Relations
830 Punchbowl Street
Honolulu, HI 96813

Prepared in cooperation with:
Industrial Relations Center
University of Hawaii at Manoa
2425 Campus Road
Honolulu, HI 96822

Senior Economist, W.E. Upjohn Institute for Employment Research, 300 South Westnedge Ave., Kalamazoo, MI 49007 (616/343-5541) and Associate Professor of Economics, Michigan State University, East Lansing, MI 48824 (517/355-4587).

Table of Contents

TABLE OF CONTENTS i

LIST OF TABLES iii

EXECUTIVE SUMMARY 1

BACKGROUND 3

MAIN FINDINGS 4

A. Where are the job vacancies and skill shortages in the Hawaii labor market? 4
1. How do employers fill vacancies? 4
2. Where are the skill shortages in the Hawaii labor market? 5

B. How well prepared are workers, and how much training do employers now provide? 6
1. Do employers believe that their recently hired workers are well or poorly prepared for work? 6
2. How much informal on-the-job training (OJT) do employers provide? 7
3. How much formal training do employers provide? 7
4. What skills are employers trying to improve when they provide formal training? 8

C. How can government help with training? 8
1. How extensive is employer interest in training assistance, and what kinds of assistance are desired? 8
2. What occupations would employers like to see government focus on? 9
3. How do opportunities and requirements for promotion vary with occupation? 9
4. To what extent do employers provide paid and unpaid leave for training that might lead to promotion? 10

IMPLICATIONS OF THE FINDINGS FOR POLICY 10

A. Problems suggested by the survey of employer training needs 10
1. On which occupational groups should the Employment and Training Fund focus? 11
2. Will it be important to focus resources on certain counties within the state? 13
3. Will it be useful to focus on employers of a particular size? 13

4. Do the needs of one or more industries appear to be greater than the needs of others? 14

B. Policies to address the problems 14
1. Provision of general training: Integration and linkage through the State Employment Service 15
2. Provision of firm- and occupation-specific training 17

ACKNOWLEDGMENTS 18

REFERENCES 20

List of Tables

Table 1 Methods Used by Hawaii Employers to Fill Vacancies, by Occupational Group

Table 2 Vacancy Rates, Difficulty of Filling Vacancies, and Length of Time Needed to Fill Vacancies, by Occupational Group

Table 3 Preparation for Work of Recently Hired Employees

Table 4 Types and Extent of Informal On-the-Job Training (OJT) Provided by Employers to New Employees

Table 5 Formal Training Participated in by Employees, by Occupation Group

Table 6 Skills Employers Try to Improve through Formal Training Programs

Table 7 Methods of Government Assistance with Training Sought by Employers

Table 8 Opportunities and Requirements for Promotion, by Occupational Group

Executive Summary

The Survey of Employer Training Needs in Hawaii was undertaken to gather information and data on the needs and preferences of employers in Hawaii regarding government assistance with training. The need for such information was created by passage of Act 68, *Session Laws of Hawaii 1991*, which created the Hawaii Employment and Training Fund "to assist employers and workers through innovative programs to include, but not be limited to, business-specific training, upgrade training, new occupational skills, management skills, and support services to improve the long-term employability of Hawaii's people."

The survey was mailed to a stratified random sample of 5,886 establishments in the State of Hawaii. The response rate was excellent: Of the 5,886 who received the survey, 1,650 (or 28 percent) returned usable responses that are included in the analysis.

A unique feature of the survey is that it obtained information on the training needs and deficiencies of seven separate occupational groups: Highly-skilled white-collar workers; sales and sales-related workers; administrative support (including clerical) workers; highly-skilled blue-collar workers; less-skilled blue-collar workers; service workers; and farming, forestry, and fishing workers.

The results of the survey present a clear justification for policy along the lines of the Hawaii Employment and Training Fund: For only two occupational groups did more than one-third of employers say that their most recently hired employees were well-prepared for work. This basic finding suggests strongly that the underlying problem facing the labor market of Hawaii can be characterized as a skill shortage.

Further, the results of the survey show that between 38 and 47 percent of employers (depending on occupational group) would like to see government provide *some form* of assistance with their formal training needs. In contrast, 15 to 23 percent of employers believe that government can do little to help with their formal training needs. In other words, *about twice as many employers indicated that they would like to see government do something to assist with formal training as indicated that government could do little to help*.

Findings from the survey point to the importance of implementing policies that would assist two occupational groups and their employers: *service workers* and *highly-skilled blue-collar workers*. Seventy percent of employers who had job vacancies for service workers reported that they have difficulty filling those vacancies. Also, service workers stand out as having more acute skill deficiencies than any other group of workers. Finally, service workers' skill deficiencies appear to be of a kind that can be best remedied through formal training, and a relatively high percentage of employers -- 28 percent -- would like to see the training costs of their service workers subsidized.

Regarding highly-skilled blue-collar workers, there is an acute labor shortage. The percentage of employers who indicate that they have difficulty filling vacancies for highly-skilled blue-collar workers is very high -- 68 percent -- and the percentage of these who report that lack of applicant training is a problem in filling skilled blue-collar vacancies -- 91 percent -- is far higher than for any other occupational group.

For both service and highly-skilled blue-collar workers, the findings point to a problem of skill shortage that could be addressed through appropriate employment and training policy. There is also a somewhat weaker case for directly Employment and Training Fund resources toward two other occupational groups: sales and less-skilled blue-collar workers.

The findings do not suggest a strong need to target certain counties or to vary policies from county to county. Neither do the findings suggest a strong case for targeting employers of a certain size, or for targeting employers in certain industries. Rather, the need is for targeting certain occupations -- in particular service and highly-skilled blue-collar occupations.

The last section of the report suggests a two-pronged approach to implementing the Employment and Training Fund. The first approach would provide general training to service workers (and possibly others in need of improved general skills) by improving the linkage between workers who need to upgrade their skills and programs that could help them. The Employment Service -- as a strategically located information-gathering and counseling organization -- is the logical organization around which to integrate and link existing education and training programs, and to implement improvements in existing programs.

The second approach would continue firm-specific training programs under the Aloha State Specialized Employment and Training Program (ASSET), and occupation-specific entry and upgrade training programs formerly funded by the High Demand Occupations Training program. The findings of the Survey of Employer Training Needs suggest gearing Hawaii's customized and occupation-specific training programs to the needs of service workers and highly-skilled blue-collar workers and their employers with the goal of alleviating skill shortages in these labor markets.

Employer Training Needs in Hawaii
Summary Report

Stephen A. Woodbury

Background

The Survey of Employer Training Needs in Hawaii was undertaken to gather information and data on the needs and preferences of employers in Hawaii regarding government assistance with training. The assessment of needs was part of an overall study of programs to be implemented under Act 68, *Session Laws of Hawaii 1991*, which created the Hawaii Employment and Training Fund "to assist employers and workers through innovative programs to include, but not be limited to, business-specific training, upgrade training, new occupational skills, management skills, and support services to improve the long-term employability of Hawaii's people."

The survey was a cooperative effort of the Industrial Relations Center, University of Hawaii at Manoa, and the Research and Statistics Office of the Hawaii State Department of Labor and Industrial Relations. The survey was mailed to a stratified random sample of 5,886 establishments in the State of Hawaii. The response rate was excellent: Of the 5,886 who received the survey, 1,650 (or 28 percent) returned usable responses that are included in the analysis.

A unique feature of the survey is that it obtained information on the training needs and deficiencies of seven separate occupational groups: Highly-skilled white-collar workers (executive, managerial, professional, paraprofessional, and technical workers), sales and sales-related workers, administrative support (including clerical) workers, highly-skilled blue-collar workers (precision production, craft, and repair workers), less-skilled blue-collar workers (machine operators, assemblers, handlers, helpers, and laborers), service workers (for example, protective services, food service, lodging, and recreation workers), and farming, forestry, and fishing workers.

Main Findings

A. Where are the job vacancies and skill shortages in the Hawaii labor market?

To elicit information on where the job vacancies and skill shortages are in the Hawaii labor market, the survey asked two main questions: (1) How do employers fill vacancies? and (2) Where are the skill shortages in the Hawaii labor markets? The main findings on these questions can be summarized as follows.

1. ***How do employers fill vacancies?*** *Newspaper help-wanted ads* and *references from current employees* are the two most commonly used methods used by employers to fill vacancies. The *State Employment Service* is the next most commonly used method, followed by *private employment agencies*. Although there is some overlap in occupations served by the Employment Service and private agencies, it appears that the Employment Service tends to specialize in filling vacancies for administrative support, blue-collar, and service workers, whereas private agencies have tended to specialize in filling vacancies for highly-skilled white-collar and sales workers. Although there are some differences among occupations in the importance of the various methods of filling vacancies, in general, methods of filling vacancies that are important for one occupational group are relied upon for other groups as well. (See Table 1.)

There are some differences in the ways employers fill vacancies by county, by size of establishment, and by industry.[1] Regarding *intercounty differences*, the Employment Service is viewed as an important method of filling vacancies throughout the state, although employers on the neighbor islands view the Employment Service as even more important than do employers in Honolulu. Employers in Honolulu are significantly more likely than employers on the neighbor islands to use private employment agencies. Also, employers on the neighbor islands are more likely not to recruit formally (that is, to rely on walk-ins) than are employers in Honolulu.

Regarding differences in methods of filling vacancies by *establishment size*, larger employers are more likely than smaller employers to use help-wanted ads, references from current employees, the Employment Service, and private employment agencies. Regarding differences *by industry*, both the Employment Service and private employment agencies are most heavily used by employers in three industries: manufacturing; wholesale trade; and finance, insurance, and real estate. In addition, employers in the health service industry are especially likely to rely on the Employment Service.

2. ***Where are the skill shortages in the Hawaii labor market?*** The survey examined four gauges of labor shortage for each of seven occupational groups -- see Table 2. The first is

---

[1]Findings reported in this paragraph and the next are based on a regression analysis presented in the unabridged final report, but not presented in this summary. The regression analysis estimated each outcome variable as a function of occupational group, county, employer size (3-9 workers, 10-19 workers, 20-49 workers, more than 49 workers), expected future employment and sales, type of establishment (central office, branch, company with a single location, or franchise), and industry (manufacturing; transportation and public utilities; wholesale trade; retail trade (excluding eating and drinking establishments); eating and drinking establishments; finance, insurance, and real estate; business, legal, educational, and other professional services; hotels, personal, entertainment, and other services; health services; and agriculture, forestry, fishing, and other).

the *vacancy rate* -- that is, the number of job vacancies per 100 total jobs in an occupation.[2] The vacancy rate for *service workers* -- about 8 vacancies per 100 total jobs -- is much higher than that in any other occupational group. In other occupational groups, vacancy rates are between 2.5 and 5.5 vacancies per 100 total jobs.

The second gauge of labor shortage is the *difficulty of filling vacancies*. For most occupations, between 61 and 72 percent of employers indicate that vacancies are difficult to fill, with *sales, service,* and *highly-skilled blue-collar* jobs topping the list.

The third gauge of labor shortage is whether *lack of applicant training* poses a barrier to filling vacancies, given that vacancies are difficult to fill. Over 90 percent of employers who employed *highly-skilled blue-collar workers* and indicated difficulty filling current vacancies also said that lack of applicants' training was a problem in filling those vacancies. In other occupations, only 35 to 60 percent of employers indicated that lack of applicants' training posed a barrier to filling vacancies.

The fourth gauge of labor shortage is the *number of weeks needed to fill a vacancy*. For most occupational groups, employers reported that job vacancies were filled in an average of 3.5 to 4 weeks. The most *highly-skilled jobs* -- both highly-skilled white-collar and highly-skilled blue collar jobs -- required somewhat longer to fill (about 4.5 to 5.5 weeks).

There are only minor differences in labor shortages across the four counties of the state.[3] The survey results also suggest that labor shortages are only weakly related to employer size and that there is relatively little inter-industry variation in the four labor shortage variables. That is, *labor shortages vary mainly by occupation rather than by county, employer size, or industry*.

B. How well prepared are workers, and how much training do employers now provide?

To obtain further information on the extent of the shortage of labor market skills, the survey asked the following questions: (1) Do employers believe that their recently hired workers are well or poorly prepared for work? (2) How much informal on-the-job training (OJT) do employers provide? (3) How much formal training do employers provide? (4) What skills are employers trying too improve when the provide formal training? The main findings of the survey are summarized below.

1. *Do employers believe that their recently hired workers are well or poorly prepared for work?* Relatively few employers felt that their recently hired employees were job-ready. In

---

[2]"Total jobs" refers to the sum of current employment and current job vacancies. Hence, the vacancy rate is the number of job vacancies divided by the sum of current employment and job vacancies, times 100.

[3]These results come from the regression analysis in the unabridged report.

fact, for only two occupational groups did more than one-third of employers say that their most recently hired employees were well prepared for work (see Table 3).

In particular, the need to improve *specific occupational skills* seems to cut across all occupations, with the greatest deficiencies being among blue-collar workers (both highly-skilled and less-skilled), service workers, and farming, forestry, and fishing workers. The need to improve *oral communication* skills is also broad, with the need greatest among service, sales, less-skilled blue-collar, and farming, forestry, and fishing workers. Employers also cited a need to improve the *English-language, office and clerical, interpersonal relations, customer service, and managerial skills* of certain occupational groups.

Service workers stand out as having the most acute skill deficiencies, with employers citing a need to improve workers' customer service, English language, oral communication, specific occupational, and self-development skills. Sales workers are the runner-up in skill deficiencies, with employers citing a need to improve sales workers' customer service, oral communication, self-development, and specific occupational skills. Blue-collar workers (both highly-skilled and less-skilled) and farming, forestry, and fishing workers stand out because of the need to improve their specific occupational skills. (See Table 3.)

Although skill deficiencies seem to be tied most closely to occupation, other factors -- such as county, employer size, type of employer, and industry -- also play a role.[4] Specifically, employers in *Hawaii* and *Kauai* Counties were more concerned about the skill deficiencies of their recently hired workers than employers elsewhere. *Larger employers* are more likely than smaller employers to report a whole array of deficiencies in their recent hires, probably as a result of the greater importance of both general and specialized skills in larger establishments. *Franchises* are the least likely to report that their recent hires are well prepared for work, and they find their newly hired worker to be deficient in general (rather than specific occupational) skills. Finally, three industries report a strong need to improve *customer service skills* (retail trade; eating and drinking establishments; and hotels and personal entertainment services) and three other industries report a strong need to improve *specific occupational skills* (transportation and public utilities; business and professional services; and health services).

2. *How much informal on-the-job training (OJT) do employers provide?* The survey results regarding on-the-job training (OJT) reveal that *service workers receive less OJT* -- either from co-workers or from supervisors -- than do any other occupational group (see Table 4). This is the main finding about OJT. There is relatively little variation in OJT by county, employer size, type of establishment, or industry.

3. *How much formal training do employers provide?* A sizable minority of employers -- between 25 and 47 percent depending on occupational group -- reported that at least one of their workers had participated in employer-sponsored formal training in the 2 years

[4]These findings come from the regression analysis in the unabridged report.

preceding the survey. The survey results show that on-site training with an in-house trainer is the most used method of formal training (or nearly so) for all occupational groups. Next-most used is an outside trainer, either on-site or off-site. In general, types of formal training that are given to one occupational group are given to others as well. Interestingly, *service workers* (who receive the least OJT) appear to be among the higher recipients of formal (mainly on-site) training. (See Table 5.)

Compared with Honolulu employers, employers on the neighbor islands appear to be more likely to provide formal training to their workers.[5] (This may reflect the perception of neighbor island employers that their recently hired workers are not well prepared for work.) Larger employers are more likely than smaller employers to provide formal training to their employees. Regarding interindustry differences in formal training, industries that are mainly white-collar and service-providing (finance, insurance, and real estate; business and professional services; health services; hotel and personal entertainment services) tend to provide more formal training than do other industries.

4. *What skills are employers trying to improve when they provide formal training?* There is considerable diversity in the skills that employers try to improve through formal training, and *this diversity seems to depend mainly on occupation* (see Table 6). Efforts to improve interpersonal relations, customer service, and self-development skills cut across several occupational groups. Efforts to improve specific occupational skills through formal employer-provided training are concentrated on blue-collar workers, service workers, and to some degree highly-skilled white-collar workers. It appears that efforts to improve skills through formal training (as shown in Table 6) reflect employers' perceptions of the skill deficiencies of recently hired workers (refer to Table 3).

C. How can government help with training?

A central purpose of the Survey of Employer Training Needs was to discover what types of training assistance employers would like to see government provide. The survey asked the following questions related to employer training needs: (1) How extensive is employer interest in training assistance, and what kinds of assistance are desired? (2) What occupations would employers like to see government focus on? (3) How do opportunities and requirements for promotion vary by occupation? (4) To what extent do employers provide paid and unpaid leave for training that might lead to promotion? This section summarizes the survey's findings.

1. *How extensive is employer interest in training assistance, and what kinds of assistance are desired?* The main finding is that between 36 and 47 percent of employers (depending on occupational group) would like to see government provide *some form* of assistance with their formal training needs. In contrast, 15 to 23 percent of employers believe that

[5]Findings in this paragraph come from the regression analysis presented in the unabridged report.

government can do little to help with their formal training needs. In other words, *ab out twice as many employers indicated that they would like to see government do something to assist with formal training as indicated that government could do little to help* (see Table 7).

In general, methods of training assistance that are popular for one occupational group are popular for all. *Subsidizing training costs* is the most favored method of government assistance for all occupational groups, followed by advertising available training opportunities, making training more practical and specific to workplace needs, and improving current course offerings in government-funded education and training programs. (See Table 7.)

Employers on the *Big Island* and *Kauai* have the strongest interest in some form of government assistance with formal training, but employers in the four counties are equally interested in having government subsidize training costs.[6] *Large employers* are more interested than small employers in government assistance with training needs, consistent with the greater importance of specialized skills in large establishments. Three industries -- *finance, insurance, and real estate; health services; hotels and personal entertainment services* -- have stronger interest in government assistance with training (and in government subsidies for training costs) than do other industries.

2. *What occupations would employers like to see government focus on?* As already noted, methods of training assistance that are popular for one occupational group are popular for all. That is, the survey findings suggest a fairly broad interest by employers in training assistance for workers, regardless of occupation. However, the survey does show that a relatively high percentage of employers would like to see the training costs of their service workers subsidized. (See Table 7.)

3. *How do opportunities and requirements for promotion vary with occupation?* Surprisingly, employers say that opportunities for promotion are greatest in *blue-collar occupations* (both highly-skilled and less-skilled) and in *service occupations*. (See Table 8.) Promotion opportunities vary little by county. But *large employers* are more likely to report significant opportunities for promotion than are small employers, and employers in four industries are least likely to report that opportunities for promotion exist (retail trade; eating and drinking establishments; business and other professional services; and agriculture, forestry, and fishing).

4. *To what extent to employers provide paid and unpaid leave for training that might lead to promotion?* Employers are more likely to provide *paid* leave than *unpaid* leave to white-collar workers, but are equally likely to provide paid and unpaid leave to blue-collar workers. *Service workers* are unique in that employers are more likely to provide them with unpaid leave than paid leave. (See Table 8.)

---

[6]Findings in this paragraph come from the regression analysis in the unabridged report.

Employers in the four counties are equally likely to provide paid leave.[7] Large employers are far more likely than small employers to provide both paid and unpaid leave. Among the various types of establishments, franchises are especially likely to provide paid leave. Paid leave is most common in two industries -- finance, insurance, and real estate; and health services.

Implications of the Findings for Policy

This section identifies the main problems that could be addressed by means of the Employment and Training Fund and suggests policies that might address those problems.

A. Problems suggested by the survey of employer training needs

The survey results reveal that Hawaii employers' demands for a skilled workforce are not being satisfactorily met: For only two occupational groups did more than one-third of employers say that their most recently hired employees were well-prepared for work.

This finding tends to confirm that the problem facing the labor market of Hawaii can be characterized as a *skill shortage*. The overall unemployment rate in Hawaii is low compared with other states. But unemployed workers and job vacancies coexist and persist because the skills of the available jobless workers do not match the skills demanded by employers who are expanding.

An aspect of skill shortage that was not examined in the survey was the extent to which higher wages, improved working conditions, and more attractive work schedules could alleviate a shortage. Such improvements in wages and employment conditions are the means by which a competitive labor market would resolve a shortage. The *persistence* of a shortage, however, suggests that a labor market may not be competitive, in which case the market left to itself may take a very long time to clear. One often cited circumstance is that barriers to entering an occupation -- such as costs of acquiring skill s needed to perform a job -- may plague a labor market and generate a shortage. One potentially effective policy is to increase the supply of labor to a market (that is, shift the labor supply curve) by providing subsidized training, thus lowering the barriers to entering that labor market. This is the approach implicit in the Employment and Training Fund legislation.[8]

---

[7]Findings in this paragraph come from the regression analysis in the unabridged report.

[8]The hypothesis of entry barriers is more plausible in highly-skilled blue-collar occupations than in service occupations. The perceived skill shortage in service occupations is more likely the result of an organization of production in which less-skilled workers who tend to have high turnover are paid relatively low wages. Employers' apparent desire for more-skilled service workers could reflect a willingness to shift to a different organization of production, using higher-skilled labor, but an inability (whether perceived or real) to effect that change. In any case, employers of service workers indicate that opportunities for

In this section, the survey findings are used to suggest a focus for programs implemented under the Employment and Training Fund. The main questions addressed are: (1) On which *occupational groups* should the Employment and Training Fund focus, and what skills do these groups need? (2) Will it be important to focus resources on *certain counties* within the state? (3) Will it be useful to focus resources on *employers of a particular size*? (4) Do the needs of one or more *industries* appear to be greater than the needs of others?

1. *On which occupational groups should the Employment and Training Fund focus?* Findings from the Survey of Employer Training Needs point to the importance of exploring policies that would assist two occupational groups and their employers: *service workers* and *highly-skilled blue-collar workers*.

Six findings point to the advisability of addressing problems of the *service* labor market. *First*, a strong case can be made that service workers are in short supply: the vacancy rate for service workers far exceeds that of any other occupational group and employers indicate that they have difficulty filling service vacancies. *Second*, service workers stand out as having the most acute skill deficiencies. As already noted, employers cite a need to improve the oral communication, customer service, self-development, and specific occupational skills of service workers. *Third*, service workers receive less on-the-job training (OJT) than do any other group of workers, but appear to be among the higher recipients of formal employer-provided training. This suggests that service workers have basic skill deficiencies that cannot be corrected easily through OJT; rather, employers are trying to correct these basic deficiencies through formal training. *Fourth*, a relatively high percentage of employers -- 28 percent -- would like to see the training costs of their service workers subsidized. *Fifth*, improved training could well lead to further opportunities and higher wages for service workers. Employers report that opportunities for promotion do exist for service workers, and specific on-the-job training is more frequently mentioned as a promotion requirement for service workers than for any other type of worker. *Sixth*, the relatively wide availability of unpaid leave for service workers suggests an opportunity to provide subsidized training for these workers. Altogether, provision of additional resources for training service workers could serve the dual purposes of alleviating a skill shortage faced by employers and of improving the skills, productivity, and pay of a large group of workers.

It has been suggested that service workers may not be a good group to focus on because service jobs tend to carry low pay and few benefits. But it does not follow from the fact that service jobs have relatively low pay that the benefit-cost ratio of programs that focus on service workers would be low. The benefit-cost ratio depends on the cost of the programs implemented (which depends on the nature of the programs implemented) and on the wage gains achieved by workers who receive services (that is, on the wage change that results from the training, not on the initial wage level). Since the possibility for wage gain is relatively large in a market where

---

promotion do exist, which suggests that skilled and reliable service workers can move into higher paying jobs.

there appears to be a shortage, it makes sense to focus on the occupations in which shortages are most acute.

Regarding *highly-skilled blue-collar* workers, the evidence suggests an acute labor shortage. The percentage of employers who indicate that they have difficulty filling vacancies for highly skilled blue-collar workers is very high -- 68 percent. But more important, the percentage of these employers who report that lack of applicant training is a problem in filling their skilled blue-collar vacancies -- 91 percent -- is far higher than for any other occupational group (see Table A.2). The findings strongly suggest a problem of skill shortage that could be addressed through employment and training policy.

One could also make a case for directly Employment and Training Fund resources toward two other occupational groups: *sales* and *less-skilled blue-collar* workers. The case for doing so is similar to that for service workers, but it is less strong. *First*, for both sales and less-skilled blue-collar workers, vacancy rates are relatively high, a majority of employers report difficulty in filling vacancies, and relatively high percentages (36 to 52 percent) of *those* employers report that lack of applicant training is a problem in filling vacancies. That is, it could be argued that there is a shortage of both types of workers. *Second*, sales workers are notable for overall skill deficiencies, second only to service workers, and less-skilled blue-collar workers are notable for their deficiency in specific occupational skills. *Third*, a majority of employers indicate that opportunities for promotion exist in sales and less-skilled blue-collar occupations. Although these findings add up to a case for directing Employment and Training Fund resources toward sales and less-skilled blue-collar workers, the case is less strong than for directing resources toward service and highly-skilled blue-collar occupations.

Only a weak case can be made for directing Employment and Training Fund resources toward administrative support, highly-skilled white-collar, or farming, forestry, and fishing occupations. For all three of these groups, the vacancy rate is relatively low (indicating less unmet demand for workers), and for two (sales and farming, forestry, and fishing), relatively few employers report difficulty filling vacancies.

2. *Will it be important to focus resources on certain counties within the state?* The findings do not suggest a strong need to favor certain counties, or to vary policies from county to county. The findings do suggest some differences among counties in the way vacancies are filled, in employers' concerns about skill deficiencies (those concerns are greatest in Hawaii and Kauai Counties), in formal training provided to workers (more is provided on the neighbor islands), and in general employer interest in government assistance with training (it is greater in Hawaii and Kauai Counties). But there are few differences among the four counties in the degree of labor shortage, in the amount of OJT provided to workers, in the skills employers try to provide through formal training programs, in employer interest in having government subsidize training costs, in opportunities and requirements for promotion, or in provision of leave to workers. *On balance, the findings suggest at most a limited need to tailor policies on a strict county-by-county basis*.

3. ***Will it be useful to focus on employers of a particular size?*** The survey findings do *not* seem to offer a case in favor of targeting the resources of the Employment and Training Fund toward smaller employers. *If anything, the survey suggests that large employers might be better targets*. Although labor shortages do not vary with employer size, nearly every other variable examined in the Survey of Employer Training Needs varies with size of establishment. Large employers are more likely than small employers to recruit actively and through formal channels, are more likely to report deficiencies in the preparation for work of recently hired workers, are more likely to provide OJT and formal training programs, and are more interested in government assistance with training needs. Large employers also report greater opportunities for promotion and greater provision of leave for training that might lead to promotion. These findings reflect what many economists and organization behaviorists have long argued: that specialization of labor and diversity of skills increase with firm size, and hence large firms have a greater need for skilled workers. In short, skills are more important the larger the employer.

On the other hand, it is often argued that smaller firms cannot match the training resources of larger employers; that they cannot release workers during regular working hours as easily as larger employers can; and that they tend to lose their better employees, after training them, to larger firms who pay higher wages and offer better career development opportunities. Such arguments provide a case for directing training resources toward smaller employers.

Balancing the survey findings against the arguments in favor of targeting small firms suggests than an even-handed approach to allocating Employment and Training Fund resources by employer size may be appropriate. That is, it would not make sense to avoid large employers in allocating Employment and Training Find resources.

4. ***Do the needs of one or more industries appear to be greater than the needs of others?*** It is difficult to discern a clear pattern in the variation of employer training needs by industry. *There is relatively little variation in labor shortage by industry*. There is significant variation in the degree to which employers in different industries perceive their recent hires to be well prepared for work, provide OJT and formal training to workers, try to improve workers' skills through training, are interested in government assistance with training, provide opportunities for promotion, and provide leave for training. But these interindustry differences do not appear to add up to a clear case for targeting one or another industry. *Rather, it seems more appropriate to target certain occupations -- in particular, service and highly-skilled blue-collar occupations*.

B. Policies to address the problems

Policymakers and labor economists have come to rely on the distinction between general training and specific training in discussing employment and training policy. *General training* is training that can be put to productive use with any employer. Primary schooling provides the most general kinds of training -- in math, reading, and writing. But general training may also be acquired through formal postschooling and training programs and on-the-job training. In

contrast, *specific training* is by definition productive and useful only in a given occupation or with the employer where the training is received. Specific training is usually acquired on the job, but can also be learned in formal employer-sponsored training programs. (On the distinction between general and specific training, see Becker 1964.)

The findings presented above (in the section on"How well prepared are workers, and how much training do employers now provide?") suggest that certain types of *general* training that employers value may be under-provided by state-supported education institutions (mainly secondary schools and community colleges). Oral communication, interpersonal relations, customer service, self-development, and office and clerical skills are all general skills that many employers are trying to provide to their workers through formal training. Service workers are considered especially deficient in these general skills. Consideration should be given to allocating resources to state-supported education institutions for the purpose of developing programs to provide general skills that are not now provided. It would also be highly useful to explore possible improvements in programs that provide general skills where those programs are now deficient.

Other skills that employers are trying to improve through formal training are *occupation-specific*. It would make little sense to develop or improve courses in specific skills to be widely offered at the level of secondary schools and community colleges. Such skills are required by a relatively small and specific part of the labor force, and they are best learned by individuals who are already in a particular occupation. Hence, formal training programs provided by employers are a more efficient way of providing and improving occupation-specific skills.

The division of education and training into two types -- general and specific -- leads naturally to two types of policy. The first are policies that assist workers who need general skills to acquire general training. The second are policies that assist workers who lack occupation- and firm-specific skills to acquire specific training. Efficient resource allocation requires that both types of policy be integrated with employers' demand for labor and be directed toward occupations in which there is a labor shortage.

The least costly approach to improving workers' skills is to make use of -- or to expand -- existing programs and organizations. The remainder of this section outlines an approach to enhancing general skills by improving the linkage between employers and workers who both require skills, and a method of improving specific skills by direct subsidies of employer training costs through firm-specific training assistance, occupation-specific entry programs, and upgrade training programs.

1. *Provision of general training: Integration and linkage through the State Employment Service.* One way of alleviating the shortages revealed by the Survey of Employer Training Needs would be to provide improved linkage between workers who need to upgrade their skills and programs that could help them. The Employment Service is the logical organization around which to integrate and link existing education and training programs. It is

a strategically located information-gathering and counseling organization. The few states that currently integrate services -- including New York and Pennsylvania -- organize their coordination efforts around the Employment Service. Also, the Survey of Employer Training Needs suggests the effectiveness of the Employment Service with service workers -- an occupational group that should be targeted by policy.

Part of the rationale for integration and linkage comes from existing research on the effectiveness of retraining for displaced workers. For example, intensive job-search assistance has shown itself to be highly cost-effective in experiments. Training that is linked to job counseling and job-search assistance may also be effective, and this provides an additional rationale for integration and linkage (Leigh 1989, 1990; Bloom 1990).

The basic idea behind integrating existing services and linking currently unserved workers to these services is that gaps in the employment and training system can be filled efficiently by making better use of existing programs. The underlying question is, how can a state best organize the delivery of its employment and training services?

Approaches to improving the linkage between employers and workers include expanding such activities as: (a) referral of workers who are not job-ready to existing training programs that would prepare them for occupations in which there are job vacancies; (b) job counseling services; (c) intensive job-search services; (d) quick response to shortages and implementation of new training programs that would prepare workers for jobs that are in demand; and (e) subsidized on-the-job training. The Hawaii State Employment Service also has strong computerized data bases of applicants and job listings, and is exploring ways of using those data bases to target types of workers and specific employers who would benefit from training assistance. All of these approaches would require allocating additional resources to the Employment Service.

The goal of these policies should be to provide general training in oral communication skills (including English as a second language), customer service skills, and self-development skills to service workers (and perhaps also to sales and sales-related workers). Also, given resources and flexibility, the Employment Service could combine these approaches in ways that would assist young workers in the transition from school to work.

2. *Provision of firm- and occupation-specific training.* The State of Hawaii currently has in place a customized training program -- the Aloha State Specialized Employment and Training Program -- ASSET. ASSET provides *firm-specific training assistance* to newly locating employers and to employers who have plans to create new jobs. ASSET's focus is on businesses in high technology and growth industries, and like customized training programs in other states, it is part of the State's efforts to attract new business and increase employment opportunities (see Commission on Employment and Human Resources, 1991, for a fuller summary).

The State also had, from July 1989 through June 1992, a High Demand Occupations Training Program, which focused on *occupation-specific entry programs* and *upgrade training programs*. The purpose of High Demand was to fund "short-term, fast-start" training programs that would prepare workers for employment in occupations that were growing or in high demand (see again Commission on Employment and Human Resources, 1991, for a fuller summary). The objectives of the High Demand Occupations Training Program are included in the Hawaii Employment and Training Fund legislation.

The findings of the Survey of Employer Training Needs in Hawaii suggest gearing Hawaii's firm- and occupation-specific training programs to the needs of service workers and (especially) high-skilled blue-collar workers and their employers, with the goal of alleviating the skill shortages in these labor markets. The survey does not suggest that it would be useful to target Employment and Training Fund resources on any particular county or industry. Rather, the survey findings suggest that applications for funding from employers (and their associations), employee organizations, and education and training institutions should be considered mainly in regard to two criteria: (a) How effectively would shortages of service and highly-skilled blue-collar workers be alleviated? (b) Can it be demonstrated that existing training resources are inadequate for an employer's particular hiring needs?

Acknowledgments

This summary report is the result of the efforts and cooperation of many people from different organizations. Joyce M. Najita, Director of the Industrial Relations Center at the University of Hawaii at Manoa, provided guidance and substantial input and at every step, and it is only at her insistence that she is not listed as a coauthor of the report.

Debbie Wong, also of the Industrial Relations Center, performed essential tasks in preparing the Survey of Employer Training Needs in Hawaii and in coordinating the conversion of the completed surveys from hard copy to machine-readable format. Her efforts have been outstanding.

Similarly, the efforts and advice of many in the State of Hawaii Department of Labor and Employment Relations were essential to the successful completion of the project. In particular, Naomi Harada and her staff in the Research and Statistics Office of the Hawaii Department of Labor and Employment Relations, offered an extraordinary degree of cooperation.

In addition, I am grateful to many others in the Department of Labor and Industrial Relations, who helped both materially and by sharing their thoughts with me on various aspects of Act 68 and the Survey of Employer Training Needs. They include, in alphabetical order:

Patricia Dauterman, Program Coordinator, Aloha State Specialized Employment and Training, DLIR
David Komori, Administrator, Human Resources Development and Special Programs, DLIR
Charles Kuboi, Manager, Honolulu Office, Hawaii State Employment Service, DLIR
Sybil Kyi, Executive Director, Commission on Employment and Human Resources
Howarth Matsuyama, Manager, Oahu County Branch, Hawaii State Employment Service, DLIR
Claudette Naauao, Administrator, Hawaii State Employment Service, DLIR
Douglas Odo, Administrator, Unemployment Insurance Division, DLIR
Frederic Pang, Administration Chief, Research and Statistics Office, DLIR
Mario Ramil, Former Director, DLIR
Robert Suzuki, Supervisor, Honolulu Office, Hawaii State Employment Service, DLIR
Alvin Tanaka, Manager, Maui County Branch, Hawaii State Employment Service, DLIR
Dwight Takamine, House of Representatives
Robert Watada, Administrator, Office of Employment and Training Administration, DLIR

In large part, the high rate of response to the Survey of Employer Training Needs in Hawaii was a result of the efforts of the Job Service Employers Councils of Kauai and Honolulu Counties, and the Job Service Employer Committees of Hawaii and Maui Counties, who actively urged employers in each county to respond to the survey. The efforts of these organizations and

their leaders are gratefully acknowledged, as are the efforts of the hundreds of supervisors, managers, and executives who took the time to complete and return the surveys.

At the W.E. Upjohn Institute for Employment Research in Kalamazoo, Michigan Wei-Jang Huang put in an extraordinary effort in handling a difficult data set and producing crosstabulations and regressions. Ellen Maloney and Claire Vogelsong were equally efficient and expert in preparing the tables and handling various necessary details. All of this was done by telephone, fax, and e-mail between the Upjohn Institute and the University of Stirling in Scotland, where the report was written. I am grateful to the Economics Department at Stirling for providing the resources needed to communicate with other project participants in Michigan and Hawaii. The distances involved in preparing the report are further testimony to the cooperative spirit of all involved.

Also at the Institute, Kevin Hollenbeck, Louis Jacobson, and Robert Spiegelman all offered helpful comments on various aspects of the project. I am grateful for their advice.

Financial support for the project was provided by the State of Hawaii through the Industrial Relations Center of the University of Hawaii at Manoa.

References

Becker, Gary S. *Human Capital*. New York: National Bureau of Economic Research, 1964.

Bloom, Howard S. *Back to Work: Testing Reemployment Services for Displaced Workers*. Kalamazoo: W.E. Upjohn Institute for Employment Research, 1990.

Commission on Employment and Human Resources. *1991 Report to the Governor on Employment*. Honolulu: State of Hawaii Department of labor and Industrial Relations, June 1991.

Leigh, Duane E. *Assisting Displaced Workers: Do the States Have a Better Idea?* Kalamazoo: W.E. Upjohn Institute for Employment Research, 1989.

Leigh, Duane E. *Does Training Work for Displaced Workers? A Survey of Existing Evidence*. Kalamazoo: W.E. Upjohn Institute for Employment Research, 1990.

Woodbury, Stephen A. *Employee Training Needs in Hawaii: Analysis of the 1991 Survey*. Final Report. Submitted to the State of Hawaii, Department of Labor and Industrial Relations. Honolulu, Hawaii: Industrial Relations Center, University of Hawaii at Manoa, April 1992.

Table 1
Methods Used by Hawaii Employers to Fill Vacancies,
by Occupational Group
(Figures show the weighted percentage of employers using each method, given that they employ at least one worker or have at least one vacancy in the group shown.)

Methods used to fill vacancies	Highly-skilled white-collar	Sales, sales-related	Administrative support (including clerical)	Highly-skilled blue-collar	Less-skilled blue-collar	Service workers	Farming, forestry, fishing
State Employment Service	11.4	13.8	21.4	26.6	26.3	30.0	23.7
Secondary schools	0.6	0.6	1.4	0.2	0.5	1.7	0.0
Vocational- technical schools	3.9	1.9	8.6	12.5	6.9	4.7	1.8
Community colleges	3.3	2.7	10.0	5.3	2.4	3.5	0.9
4-year colleges and universities	11.8	5.7	3.4	0.3	1.0	1.4	0.0
Newspaper help-wanted ads	52.2	62.4	65.1	57.9	53.9	71.2	46.5
Other media	4.5	3.1	2.4	1.8	4.5	2.9	2.6
Signs	1.7	11.7	1.5	0.9	1.5	10.6	4.4
References from current employees	35.0	50.8	45.6	52.6	55.7	72.4	57.9
Private employment agencies	18.0	15.4	17.6	7.9	9.2	6.3	1.8
Union(s)	0.8	0.2	0.4	9.6	9.3	0.4	6.1
No active recruiting/ walk-ins only	8.4	10.7	8.1	9.6	16.1	18.8	27.2
Other	21.9	11.1	10.3	5.2	6.4	7.0	10.5
Nonresponse	17.5	9.8	11.2	8.8	11.0	3.6	10.5
Sample size (weighted)	4359	2066	3436	1193	1308	1225	114
Sample size (unweighted)	1496	728	1255	500	536	550	51

Notes: See the text for a discussion of the occupational groups used. The sample comprises employers with at least one worker or vacancy in the group shown. Employers could give up to 3 methods used to fill vacancies for each occupational group.

Table 2
Vacancy Rates, Difficulty of Filling Vacancies, and Length of Time Needed to Fill Vacancies, by Occupational Group

	Highly-skilled white-collar	Sales, sales-related	Administrative support (including clerical)	Highly-skilled blue-collar	Less-skilled blue-collar	Service workers	Farming, forestry, fishing
Average vacancy rate[1]	2.6	5.5	3.5	5.0	4.0	7.9	2.9
Sample size (weighted)	4359	2066	3436	1193	1308	1225	114
Difficulty filling current vacancies[2] (% of employers)	65.7	71.8	38.1	68.2	61.1	69.9	47.8
Lack of applicants' training a problem in filling vacancies[3] (% of employers)	60.2	35.7	53.4	91.0	51.9	34.8	45.5
Number of employers with current vacancies (weighted)	693	511	648	245	265	551	23
Average number of weeks needed to fill a vacancy	5.3	3.5	3.8	4.4	3.5	3.7	2.4
Number of employers reporting vacancy(ies) filled in last year (weighted)	1429	999	1543	499	639	816	53

[1]Number of job vacancies per 100 total jobs (sum of current employment and current job vacancies). Calculated for each employer and averaged over employers.
[2]Percentage of employers who indicated difficulty filling vacancies, given than they had at least one job vacancy in the occupational category.
[3]Percentage of employers reporting that lack of applicants' training was a problem in filling vacancies, given that they had at least one vacancy in that occupational category and indicated difficulty filling vacancies.

Table 3
Preparation for Work of Recently Hired Employees
(Figures show the weighted percentage of employers reporting that workers in each category fit a given description.)

Observation(s) about the most recently hired worker	Highly-skilled white-collar	Sales, sales-related	Administrative support (including clerical)	Highly-skilled blue-collar	Less-skilled blue-collar	Service workers	Farming, forestry, fishing
Well-prepared for the job	43.9	23.1	37.7	18.6	27.1	18.8	5.7
Skills needing improvement:							
oral communication	6.0	21.1	9.7	8.4	26.9	27.6	26.4
written communication	5.4	7.1	9.7	6.6	9.1	8.3	7.5
reading comprehension	0.6	1.4	2.4	5.0	6.4	5.5	15.1
basic mathematical	0.8	5.3	3.7	2.4	4.9	4.5	0.0
basic computing	1.3	7.1	7.8	1.0	1.3	0.6	0.0
advanced mathematical	0.6	0.9	1.4	0.6	0.0	0.6	0.0
office/clerical	3.1	2.8	20.7	0.4	0.5	1.1	0.0
interpersonal relations	10.6	16.1	7.8	5.8	8.1	11.6	5.7
managerial and leadership	15.0	4.6	3.6	1.0	1.9	0.9	0.0
customer service	8.6	32.1	8.2	4.6	9.1	32.1	1.9
self-development	8.3	18.4	7.8	11.6	12.2	20.5	15.1
specific occupational	15.4	17.9	17.2	30.7	34.1	25.6	37.7
English language (due to English as a second language)	2.2	3.3	5.4	7.2	12.4	31.4	32.1
other	2.2	2.3	2.0	2.4	3.0	4.0	0.0
Nonresponse	29.4	16.6	17.1	37.9	19.9	18.1	35.8
Sample size (weighted)	1429	999	1543	499	639	816	53
Sample size (unweighted)	566	380	626	218	282	373	29

Notes: The sample comprises employers who reported that they filled at least one vacancy at some time inthe year preceding the survey. Employers were asked to give up to 3 skills needing improvement for each occupational group.

Table 4
Types and Extent of Informal On-the-Job Training (OJT) Provided by Employers to New Employees
(Figures show the weighted percentage of employers who provide specified types and amounts of OJT to each occupational group.)

	Highly-skilled white-collar	Sales, sales-related	Administrative support (including clerical)	Highly-skilled blue-collar	Less-skilled blue-collar	Service workers	Farming, forestry fishing
Hours of OJT provided by co-workers:							
0	26.4	20.3	17.4	17.4	18.8	20.5	29.7
less than 8	13.3	20.0	12.9	27.0	10.6	29.4	27.0
8 to 16	16.8	16.3	20.7	14.9	16.0	12.1	10.8
16 to 40	17.9	16.6	20.3	12.6	24.7	18.3	16.2
more than 40	23.1	23.8	26.0	23.9	25.5	16.7	16.2
Some, but hours not indicated	2.4	3.0	2.6	4.3	4.4	3.0	0.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Imputed average hours	19.6	19.9	22.3	19.2	23.0	16.6	15.0
Hours of OJT provided by supervisors:							
0	15.5	13.1	15.3	12.8	17.9	7.6	10.8
less than 8	14.0	12.1	13.6	13.4	22.5	22.1	43.2
8 to 16	13.9	25.3	18.1	27.7	17.9	31.8	2.7
16 to 40	15.8	19.7	20.7	14.6	13.6	12.2	5.4
more than 40	37.1	25.4	29.2	24.2	24.7	14.5	32.4
Some, but hours not indicated	3.6	4.4	3.0	7.3	3.3	11.8	5.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Imputed average hours	26.2	22.4	23.8	20.9	20.1	15.8	20.9
Sample size (weighted)	1429	999	1543	499	639	816	53
Samples size (unweighted)	566	380	626	218	282	373	29
Nonresponse (unweighted)	119	49	78	43	33	34	6

Notes: The sample comprises employers who reported that they filled at least one vacancy in the year preceding the survey.

Table 5
Formal Training Participated in by Employees, by Occupation Group
(*Figures show the weighted percentage of employers whose workers participated in the specified types of training in the last 2 years.)*

Type of formal training participated in	Highly-skilled white-collar	Sales, sales-related	Administrative support (including clerical)	Highly-skilled blue-collar	Less-skilled blue-collar	Service workers	Farming, forestry, fishing
On-site training with an in-house trainer	20.7	31.9	21.2	22.8	14.4	33.4	15.8
On-site training with an outside trainer	11.8	7.7	11.0	7.3	4.9	11.0	3.5
Off-site training with an in-house trainer	4.8	5.9	3.3	3.9	2.1	4.2	0.0
Off-site training with an outside trainer	22.6	11.9	12.9	8.0	5.3	7.3	1.8
Customized training[1]	8.1	2.9	6.1	4.1	1.6	1.6	0.9
Primary/secondary school-based training (not customized)	0.1	0.0	0.4	0.3	0.0	0.2	0.0
Vocation/technical school-based training (not customized)	1.9	0.7	1.3	2.7	2.8	1.1	2.6
Community college-based training (not customized)	2.6	0.6	4.3	1.7	1.1	1.1	0.0
University/4-year college based training (not customized)	2.7	0.4	1.3	0.2	0.0	0.0	0.0
Apprenticeship programs	1.0	1.5	0.5	10.1	3.6	0.8	0.9
Internship programs	1.7	0.7	0.6	2.0	0.6	1.8	1.8
Other	4.8	3.5	4.5	3.3	3.3	2.6	2.6
Employer shares the costs of formal training with another company or union	5.3	2.4	2.4	3.7	2.0	2.3	0.9
Some formal training	47.1	45.1	41.6	42.2	28.5	44.6	25.4
No formal training/ nonresponse	52.9	54.9	58.4	57.8	71.5	55.4	74.6
Sample size (weighted)	4359	2066	3436	1193	1308	1225	114
Sample size (unweighted)	1496	728	1255	599	536	559	51

Notes: The sample comprises employers with at least one worker or vacancy in the group shown. Employers could give up to 3 types of training for each occupational group.

[1]Establishment contracts with a school or college for a specified curriculum.

Table 6
Skills Employers Try to Improve through Formal Training Programs
(Figures show the weighted percentage of employers trying to improve the specified skills, for each occupational group.)

Skills to be improved	Highly-skilled white-collar	Sales, sales-related	Administrative support (including clerical)	Highly-skilled blue-collar	Less-skilled blue-collar	Service workers	Farming, forestry, fishing
General skills:							
oral communications	13.3	25.7	14.8	8.0	12.6	30.4	24.1
written communications	9.0	7.4	13.6	5.6	2.7	13.6	0.0
reading comprehension	1.2	1.0	1.7	6.2	4.0	2.2	0.0
basic math	0.4	2.9	2.7	4.4	5.6	3.7	0.0
basic computer	12.0	7.7	41.0	2.6	2.4	2.9	0.0
advanced math	2.1	0.3	1.1	2.6	0.3	0.0	0.0
office/clerical	2.8	4.7	36.1	0.0	0.8	1.1	0.0
interpersonal relations	21.2	16.1	14.1	6.4	13.7	25.3	13.8
management and leadership	48.8	17.2	9.9	7.8	13.1	4.4	0.0
customer service	24.3	61.4	28.4	17.1	22.3	43.0	3.4
self-development	25.2	24.6	13.5	22.1	33.0	21.4	27.6
Specific occupational skills:							
manufacturing processes/ techniques/quality control	2.6	1.2	1.6	13.9	12.9	5.7	6.9
other specific occupation skills	14.4	4.3	6.4	14.9	12.3	12.5	10.3
English as a second language	0.7	1.1	1.0	1.6	4.6	12.5	13.8
Any other skills	7.8	4.6	1.5	3.2	2.7	6.0	6.9
Training programs are job-integrated	21.4	18.4	17.7	13.7	18.8	20.0	20.7
No formal training/ nonresponse	14.3	14.7	13.3	36.0	30.6	14.8	41.4
Sample size (weighted)	2053	931	1431	503	373	546	29
Sample size (unweighted)	782	365	585	234	186	271	18

Notes: The sample is restricted to employers whose workers participated in some type of formal training in the last two years (and who had at least one worker or vacancy in the group shown). Employers could give up to 3 skills that they are trying to improve for each occupational group.

Table 7
Methods of Government Assistance with Training Sought by Employers
(Figures show the weighted percentage of employers who indicate that a government activity could help with each occupational group.)

Method of government assistance desired	Highly-skilled white-collar	Sales, sales-related	Administrative support (including clerical)	Highly-skilled blue-collar	Less-skilled blue-collar	Service workers	Farming, forestry, fishing
Subsidize training costs	19.2	17.0	20.5	22.0	21.7	28.1	23.7
Advertise available training opportunities	15.5	16.4	19.0	13.8	16.6	17.0	14.9
Make training more convenient to employees	7.0	7.9	9.3	9.1	7.1	12.5	13.2
Make training more practical and specific to workplace needs	11.2	16.9	15.2	12.6	15.8	16.2	16.7
Improve course offerings in government-funded education and training programs	11.6	10.6	11.7	11.1	9.9	12.6	3.5
Increase employer input into government-funded education and training programs	8.3	6.9	8.5	6.0	5.5	9.3	7.0
Other	2.5	3.2	1.8	3.0	3.2	4.1	2.6
Government could help in some way[1]	38.1	39.6	43.3	37.7	39.7	47.3	43.0
Government could do little to help	18.9	22.5	14.6	14.5	17.9	18.9	21.1
Indifferent/nonresponse	42.9	37.9	42.1	47.8	42.4	33.8	36.0
Sample size (weighted)	4359	2066	3436	1193	1308	1225	114
Sample size (unweighted)	1496	728	1255	500	536	550	51

Notes: The sample comprises employers with at least one worker or vacancy in the group shown. Employers could give up to 3 ways that government could assist with training for each occupational group.
[1]Employer indicated that at least one method of government assistance would be desirable.

Table 8
Opportunities and Requirements for Promotion, by Occupational Group
(Figures show the weighted percentage of employers who indicate the specified opportunities and requirements for promotion.)

Opportunities and requirements for promotion	Highly-skilled white-collar	Sales, sales-related	Administrative support (including clerical)	Highly-skilled blue-collar	Less-skilled blue-collar	Service workers	Farming, forestry, fishing
Few opportunities for promotion exist	25.5	24.0	21.8	15.4	14.7	20.7	43.0
Opportunities for promotion exist	44.2	53.8	50.1	52.6	55.1	61.8	35.1
Opportunities for promotion exist, and requirements include:							
general experience	29.3	33.7	35.5	22.8	32.0	35.5	18.4
specific on-the-job training	24.8	32.5	32.1	29.3	33.6	40.9	22.8
formal workshop training	3.9	3.1	3.1	3.6	3.5	6.4	0.0
formal classroom training	4.4	2.8	3.0	1.9	3.4	4.8	0.9
apprenticeship or internship	5.5	4.5	3.1	23.2	15.1	9.3	3.5
other	1.7	1.4	1.5	1.0	1.1	3.3	1.8
Employer provides paid leave for training	20.7	14.3	16.3	11.0	10.1	9.4	8.8
Employer provides unpaid leave for training	9.8	7.6	7.5	10.6	9.6	16.4	6.16
Nonresponse	30.2	22.3	28.1	31.9	30.2	17.6	21.9
Sample size (weighted)	4359	2066	3436	1193	1308	1225	114
Sample size (unweighted)	1496	728	1255	500	536	550	51

Notes: The sample comprises employers with at least one worker or vacancy in the group shown. Employers could give up to 3 types of promotion requirements for each occupation.